LIGHTING LEGEND

X RG-1	IN-GROUND LED WALL WASH UPLIGHT, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
X RG-2	INGROUND LED NARROW FLOOD UPLIGHT @ SINGLE POLES, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
RG-3	NOT USED
X RG-4	INGROUND LED UPLIGHT EYEBALL IN PRECAST PLINTH BLOCK - SPOT LIGHT, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
X RG-5	INGROUND LED UPLIGHT EYEBALL IN PRECAST PLINTH BLOCK - FLOOD LIGHT, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
X Y PT-1	CITY OF BROCKTON STANDARD POLE & LED FULL CUTOFF FIXTURE ON SCROLL BRACKET ARM, X DENOTES SWITCHED CIRCUIT NUMBER (1-4), Y DENOTES LIGHTING DISTRIBUTION TYPE (III OR IV)
X Y PT-2	CITY OF BROCKTON STANDARD POLE & LED FULL CUTOFF FIXTURE ON SCROLL BRACKET ARM WITH 1 ACCENT LIGHT ON UPSTAND 2 3/8" TENON, X DENOTES SWITCHED CIRCUIT NUMBER (1-4), Y DENOTES LIGHTING DISTRIBUTION TYPE (III OR IV)
X Y PT-3	CITY OF BROCKTON STANDARD POLE & LED PENDANT GLOBE FIXTURE ON SCROLL BRACKET ARM, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
X Y PT-4	CITY OF BROCKTON STANDARD POLE & LED FULL CUTOFF FIXTURE ON SCROLL BRACKET ARM WITH 2 ACCENT LIGHTS ON UPSTAND CROSSBAR TROUGH, X DENOTES SWITCHED CIRCUIT NUMBER (1-4), Y DENOTES LIGHTING DISTRIBUTION TYPE (III OR IV)
X Y PT-5	CITY OF BROCKTON STANDARD POLE & LED FULL CUTOFF FIXTURE ON SCROLL BRACKET ARM WITH 4 ACCENT LIGHTS ON UPSTAND CROSSBAR TROUGH, X DENOTES SWITCHED CIRCUIT NUMBER (1-4), Y DENOTES LIGHTING DISTRIBUTION TYPE (III OR IV)
X Y PT-6	CITY OF BROCKTON STANDARD POLE & LED PENDANT GLOBE FIXTURE ON SCROLL BRACKET ARM WITH 2 ACCENT LIGHTS ON UPSTAND CROSSBAR TROUGH, X DENOTES SWITCHED CIRCUIT NUMBER (1-4)
	LIGHTING LOAD CENTER
	UNDERGROUND CONDUITS AND WIRING TO BE INSTALLED AS INDICATED ON THE DETAILS
X	RECEPTACLE POST, X INDICATES UNSWITCHED CIRCUIT NUMBER (1-3)
	HANDHOLE

ABBREVIATIONS

A	AMPERE
(ABAN)	ABANDON
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
DCR	DEPARTMENT OF CONSERVATION AND RECREATION
DIA	DIAMETER
ELEC.	ELECTRIC
EMH	ELECTRIC MANHOLE
FC	FULL CUTOFF
FT	FOOT
G	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
LC	LIGHTING CIRCUIT
LLC	LIGHTING LOAD CENTER
LP	LIGHT POLE
MASSDOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MIN.	MINIMUM
O	ORANGE
OD	OUTER DIAMETER
O.C.	ON CENTER
P	POLE
PVC	POLYVINYL CHLORIDE
RM	RIGID METAL
RGS	RIGID GALVANIZED STEEL
R&D	REMOVE AND DISPOSE
SC	SEMI-CUTOFF DISTRIBUTION
SCH	SCHEDULE
SPST	SINGLE POLE DOUBLE THROW
TMLP	TAUNTON MUNICIPAL LIGHTING PLANT
TYP.	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLT
W	WATT / WHITE
W/	WITH

GENERAL NOTES:

1. CONDUIT RUNS ARE SHOWN APPROXIMATE. LOCATIONS MAY BE ADJUSTED TO MATCH EXISTING AND PROPOSED CONDITIONS AS REQUIRED BY THE RESIDENT ENGINEER.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND SHALL VERIFY DIMENSIONS, QUANTITIES, ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND STORAGE FACILITIES.
3. STATIONING FOR POLES IS GIVEN FROM THE BASELINE CLOSEST TO THE POLE. OFFSET DISTANCE FROM STREET IS DEFINED ON LIGHT POLE FOUNDATION DETAIL.
4. ALL WIRING IN THE PANELBOARDS AND CABINETS SHALL BE PERMANENTLY LABELED AND NEATLY INSTALLED.
5. ALL CONDUIT AND EQUIPMENT TO BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, MASSACHUSETTS ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
6. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED FOR ITS INTENDED PURPOSE.
7. WIRE SIZES SHALL BE BASED ON AMERICAN WIRE GAGE (AWG), AS APPLIED TO COPPER CONDUCTORS. THE CONDUCTOR INSULATION SHALL BE TYPE USE-2 OR RHH-RHW-2.
8. WIRE AND CABLE FURNISHED AND USED SHALL BE NEW. WIRE AND CABLE SHALL BE PROTECTED FROM WEATHER AND DAMAGE DURING STORAGE AND HANDLING.
9. NO WIRE SHALL BE DRAWN IN TO ANY CONDUIT UNTIL ALL WORK WHICH MAY CAUSE CABLE DAMAGE IS COMPLETE.
10. THE CONTRACTOR SHALL CAREFULLY MARK THE PROPOSED LOCATION OF THE CONCRETE FOUNDATION AND THEN SHALL DETERMINE IF ANY UTILITIES, OR UNDERGROUND OR OVERHEAD OBSTRUCTION WILL PREVENT THE INSTALLATION AT THIS LOCATION. SIMILAR MARKING SHALL BE DONE FOR THE CONDUIT RUNS TO THE FOUNDATION. IF SUCH AN OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL REQUEST PERMISSION FROM THE ENGINEER TO MOVE OR ADJUST THE LOCATION OF THE FOUNDATION.
11. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH OR INCONVENIENCE TO BUSINESS CONCERNS OR ABUTTERS ON ACCOUNT OF THE CONSTRUCTION WORK IS KEPT TO A MINIMUM. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
12. THE CONTRACTOR SHALL BE REQUIRED TO ADHERE TO ALL REGULATIONS IMPOSED BY THE CITY OF BROCKTON.
13. ELECTRICAL SERVICE TO THE LIGHTING LOAD CENTER (LLC) WILL BE PROVIDED BY NATIONAL GRID. CONTRACTOR SHALL COORDINATE WITH NATIONAL GRID FOR SERVICE CONNECTION. CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRIC SERVICE CONNECTIONS AND RELATED FEES FROM NATIONAL GRID.
14. INSTALL PHOTO ELECTRIC SWITCH IN LLC.
15. CONDUIT SHALL BE INSTALLED WITH METALLIC DETECTABLE CAUTION TAPE ABOVE. CONDUIT SHALL BE AS FOLLOWS:
    2" SCH. 40 PVC CONDUIT BETWEEN LIGHTPOLES
    3" SCH. 80 PVC CONDUIT TO SERVICE CONNECTION MANHOLE
16. ALL WIRE SHALL BE CONTINUOUS FROM POLE TO POLE WITHOUT RUNNING SPLICES IN CONDUITS. ALL WIRES SHALL EXTEND 24" OUT OF THE POLE PULL BOX, CONNECTED AT ENDS AND ROLLED BACK INTO THE PULL BOX.
17. SPLICES SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE MASSHIGHWAY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
18. THE HOT LINE AND NEUTRAL CONNECTION IN THE POLE HANDHOLE SHALL BE WITH AN APPROVED STREET LIGHT FUSE CONNECTOR.
19. THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAY BE INCOMPLETE. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
20. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FEATURES PRIOR TO PERFORMING ANY WORK.
21. WHERE A NEW PAVEMENT SHALL MEET EXISTING PAVEMENT, THE JOINT SHALL BE SAWCUT TO A NEAT VERTICAL LINE.
22. THE CONTRACTOR SHALL MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIAL SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
23. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2003 EDITION AND THE LATEST ADDENDUMS.
24. ALL LUMINAIRES SHOULD BE OFFSET WITH THE EDGE OF THE POLE FOUNDATION LOCATED 1 FOOT FROM THE EDGE OF THE NEIGHBORING PATH OR SIDEWALK. ALL LUMINAIRES SHALL BE ORIENTED FACING THE NEIGHBORING PATH OR SIDEWALK.

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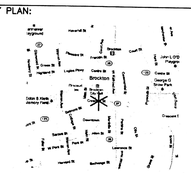


REVISIONS:

No.	Revision	Date

STAMPED AND SIGNED:

DRAWING TITLE:

ELECTRICAL LEGEND AND GENERAL NOTES

DESIGNED: TJM

DRAWN: TJM CHECKED: CWPC

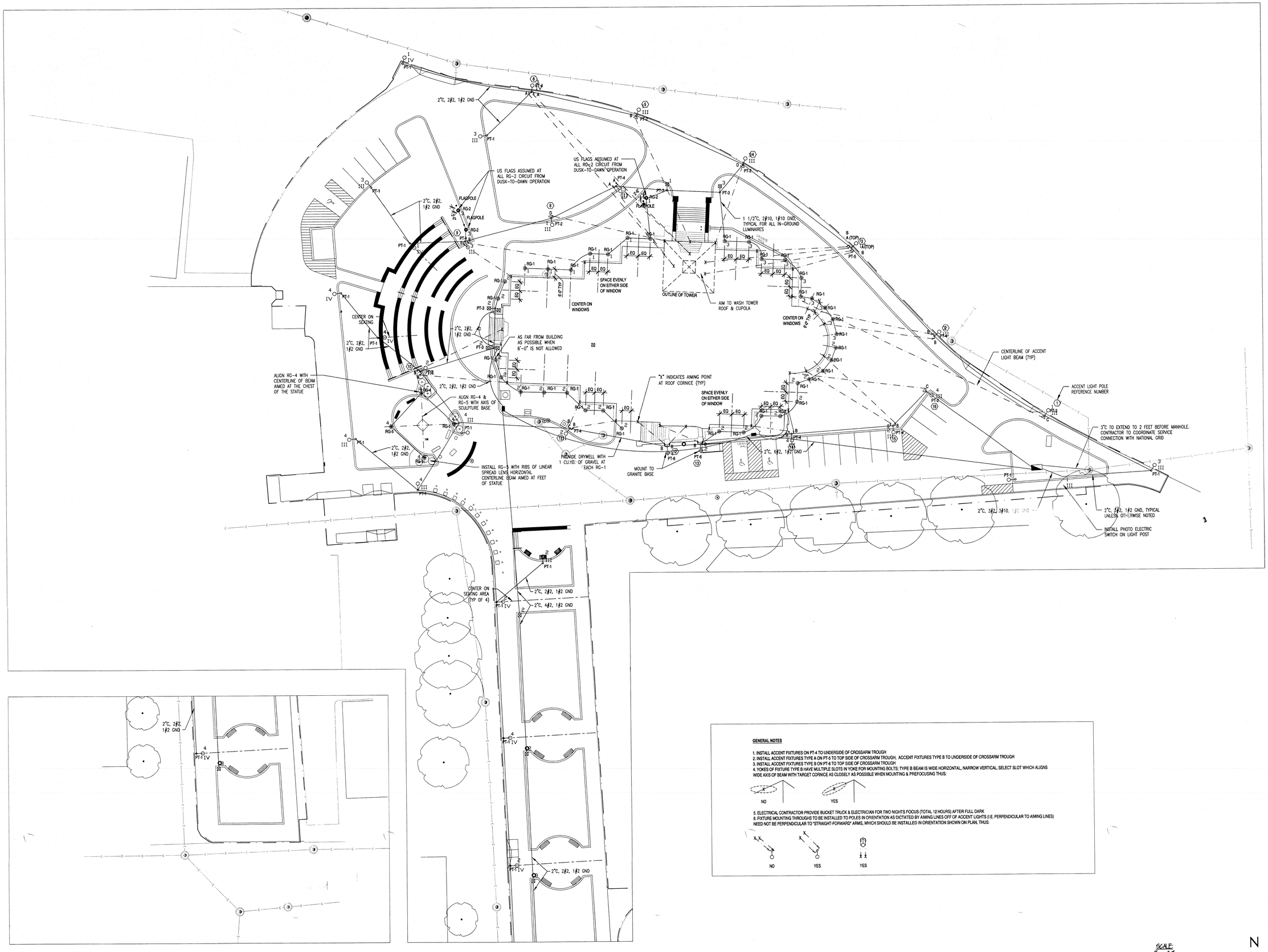
DATE: 07.31.13

SCALE: NTS

SUBMISSION: BID SET

DRAWING NO:

E-1


2°C, 2#2, 1#2 GND
US FLAGS ASSUMED AT ALL RG-2 CIRCUIT FROM DUSK-TO-DAWN OPERATION
FLAGPOLE
1 1/2°C, 2#10, 1#10 GND, TYPICAL FOR ALL IN-GROUND LUMINAIRES
SPACE EVENLY ON EITHER SIDE OF WINDOW
CENTER ON WINDOWS
OUTLINE OF TOWER
AIM TO WASH TOWER ROOF & CUPOLA
CENTER ON SEATING
AS FAR FROM BUILDING AS POSSIBLE WHEN 6'-0" IS NOT ALLOWED
ALIGN RG-4 WITH CENTERLINE OF BEAM AIMED AT THE CHEST OF THE STATUE
ALIGN RG-4 & RG-5 WITH AXIS OF SCULPTURE BASE
"X" INDICATES AIMING POINT AT ROOF CORNICE (TYP)
INSTALL RG-5 WITH RIBS OF LINEAR SPREAD LENS HORIZONTAL CENTERLINE BEAM AIMED AT FEET OF STATUE
PROVIDE DRYWELL WITH 1 CU.YD. OF GRAVEL AT EACH RG-1
MOUNT TO GRANITE BASE
CENTERLINE OF ACCENT LIGHT BEAM (TYP)
ACCENT LIGHT POLE REFERENCE NUMBER
3°C TO EXTEND TO 2 FEET BEFORE MANHOLE. CONTRACTOR TO COORDINATE SERVICE CONNECTION WITH NATIONAL GRID
2°C, 6#2, 1#2 GND, TYPICAL UNLESS OTHERWISE NOTED
INSTALL PHOTO ELECTRIC SWITCH ON LIGHT POST
CENTER ON SEATING AREA (TYP OF 4)
2°C, 4#2, 1#2 GND
2°C, 2#2, 1#2 GND

GENERAL NOTES

1. INSTALL ACCENT FIXTURES ON PT-4 TO UNDERSIDE OF CROSSARM TROUGH
2. INSTALL ACCENT FIXTURES TYPE A ON PT-5 TO TOP SIDE OF CROSSARM TROUGH. ACCENT FIXTURES TYPE B TO UNDERSIDE OF CROSSARM TROUGH
3. INSTALL ACCENT FIXTURES TYPE B ON PT-6 TO TOP SIDE OF CROSSARM TROUGH
4. YOKES OF FIXTURE TYPE B HAVE MULTIPLE SLOTS IN YOKE FOR MOUNTING BOLTS; TYPE B BEAM IS WIDE HORIZONTAL, NARROW VERTICAL, SELECT SLOT WHICH ALIGNS WIDE AXIS OF BEAM WITH TARGET CORNICE AS CLOSELY AS POSSIBLE WHEN MOUNTING & PREFOCUSING THUS:

5. ELECTRICAL CONTRACTOR PROVIDE BUCKET TRUCK & ELECTRICIAN FOR TWO NIGHTS FOCUS (TOTAL 12 HOURS) AFTER FULL DARK
6. FIXTURE MOUNTING THROUGHS TO BE INSTALLED TO POLES IN ORIENTATION AS DICTATED BY AIMING LINES OFF OF ACCENT LIGHTS (I.E. PERPENDICULAR TO AIMING LINES) NEED NOT BE PERPENDICULAR TO "STRAIGHT-FORWARD" ARMS, WHICH SHOULD BE INSTALLED IN ORIENTATION SHOWN ON PLAN, THUS:

SCALE: 1" = 20'

20 10 0 20 40

N

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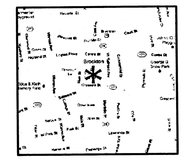

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ELECTRICAL SITE LIGHTING PLAN

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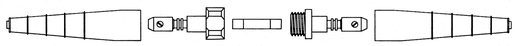
SCALE: 1"=20'

SUBMISSION: BID SET

DRAWING NO:

E-2

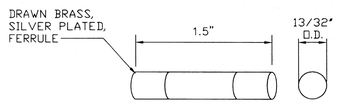


RATING: 600 VOLTS - 20 AMPS.	
FUSE SIZE: 1 1/2" x 13/32" O.D. - FERRULE 3/8"	
CONNECTOR SIZE: 8 1/2" x 7/8" O.D.	
CONNECTOR TYPE:	FUSE - QUICK DISCONNECT SET SCREW TYPE CONNECTION
CONNECTOR MATERIAL:	MOLDED PLASTIC BODY WITH RUBBER INSULATING BOOTS.
CONDUCTOR SIZE:	LINE AND LOAD #2 AWG THROUGH #12 AWG
REQUIRED FEATURES:	WATERTIGHT NO TAPING OR SEALANT REQUIRED
-FUSE HELD IN LOAD SIDE WHEN CONNECTOR IS DISCONNECTED. -PROVIDE APPROVED FUSE HOLDER WITH 'DUMMY' ROD BLANK FUSE FOR NEUTRALS	

FUSE HELD IN LOAD SIDE WHEN CONNECTOR IS DISCONNECTED.

STRAIGHT THRU CONNECTOR

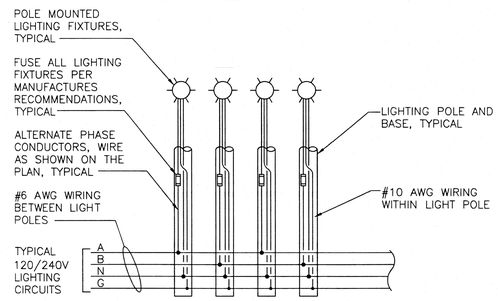
NOT TO SCALE



SIZE: MIDGET
TYPE: CURRENT LIMITING FUSE
VOLTAGE RATING: 277/480 VOLTS
USE: PROTECTION OF AREA LIGHTING EQUIPMENT

FUSES

NOT TO SCALE

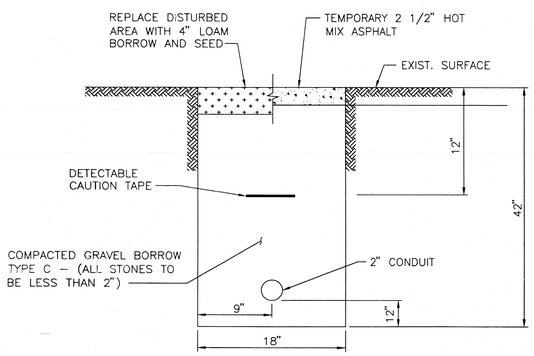

POLE MOUNTED LIGHTING FIXTURES, TYPICAL
FUSE ALL LIGHTING FIXTURES PER MANUFACTURES RECOMMENDATIONS, TYPICAL
ALTERNATE PHASE CONDUCTORS, WIRE AS SHOWN ON THE PLAN, TYPICAL
#6 AWG WIRING BETWEEN LIGHT POLES
TYPICAL 120/240V LIGHTING CIRCUITS
A
B
N
G
LIGHTING POLE AND BASE, TYPICAL
#10 AWG WIRING WITHIN LIGHT POLE

TYPICAL POLE LIGHTING WIRING SCHEMATIC DIAGRAM

NOT TO SCALE

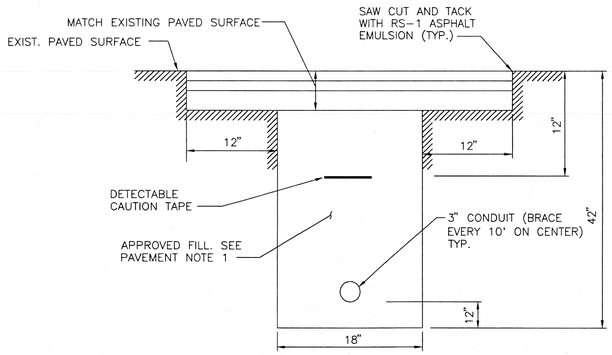
PAVEMENT NOTES FOR TRENCH PATCHING:

1. FOR TRENCH CUTS WITHIN PAVED SURFACES, (MAINLINE AND LOCAL ROADS) WHERE SUCH TRENCH CUTS HAVE A DEPTH OF 4' OR LESS, CONTROLLED DENSITY FILL (CDF) FOR BACKFILL IS MANDATORY. CONTROLLED DENSITY FILL TYPE 2E, (FLOWABLE-EXCAVATABLE)SHALL MEET THE REQUIREMENTS OF SECTION M4.08.0.



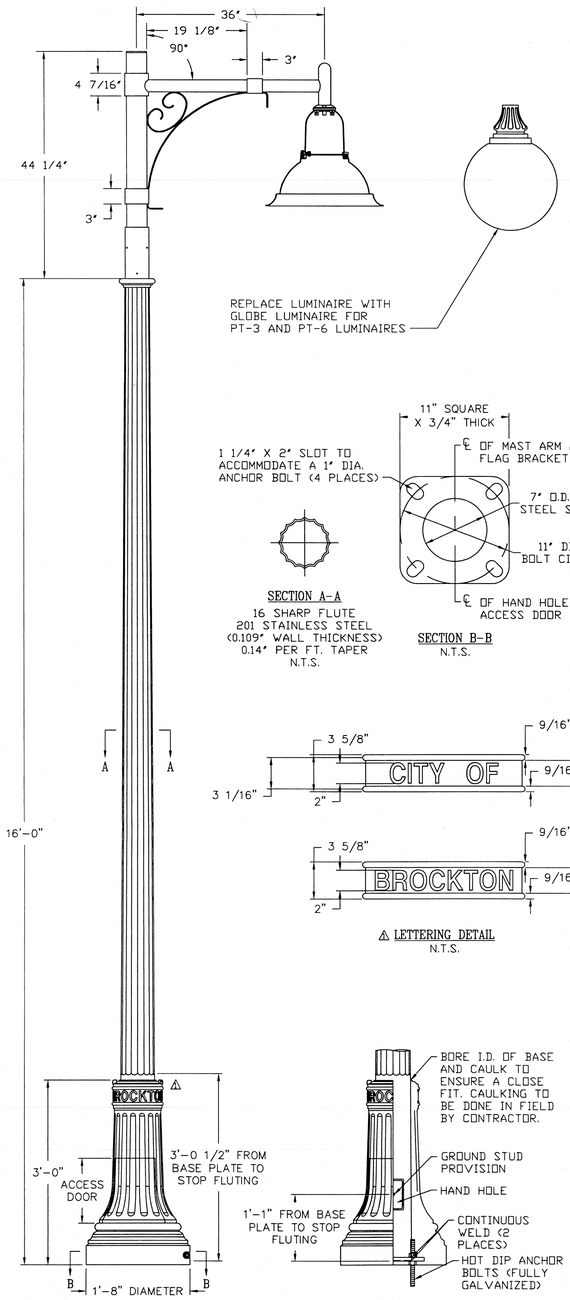
SINGLE 2" CONDUIT (UNDER GRASS AREA, MULTI-USE PATH, OR SIDEWALK)

NOT TO SCALE



CONDUIT UNDER ROADWAY

NOT TO SCALE



LIGHT POLE DETAIL

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KEY PLAN:

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No.	Revision	Date

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ELECTRICAL LIGHTING DETAILS

DESIGNED: TJM

DRAWN: TJM CHECKED: CWPC

DATE: 07.31.13

SCALE: NTS

SUBMISSION: BID SET

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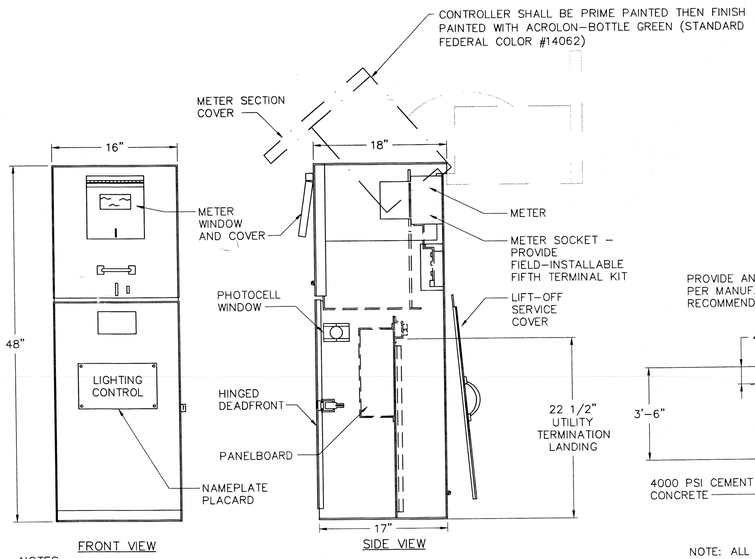
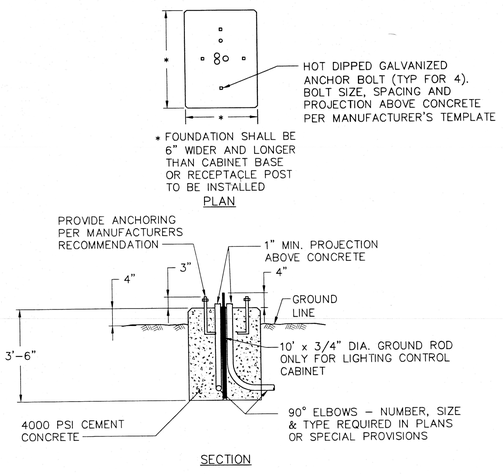
E-3



NOTES:
1. PROVIDE MILBANK CP3B51110A22SL1 MODIFIED WITH 100 AMP CONTACTOR, PHOTOCELL, FIFTH TERMINAL KIT FOR USE WITH RINGLESS METER SOCKETS (COORDINATE WITH ELECTRIC UTILITY FOR METER SOCKET REQUIREMENTS), MOUNTING BASE, ANCHOR BOLT KIT, GFCI RECEPTACLE, AND INTERNAL LIGHT FIXTURE OR EQUIVALENT BY MYERS POWER PRODUCTS, OR VIT STRONG BOX.

LIGHTING CONTROL CABINET DETAIL

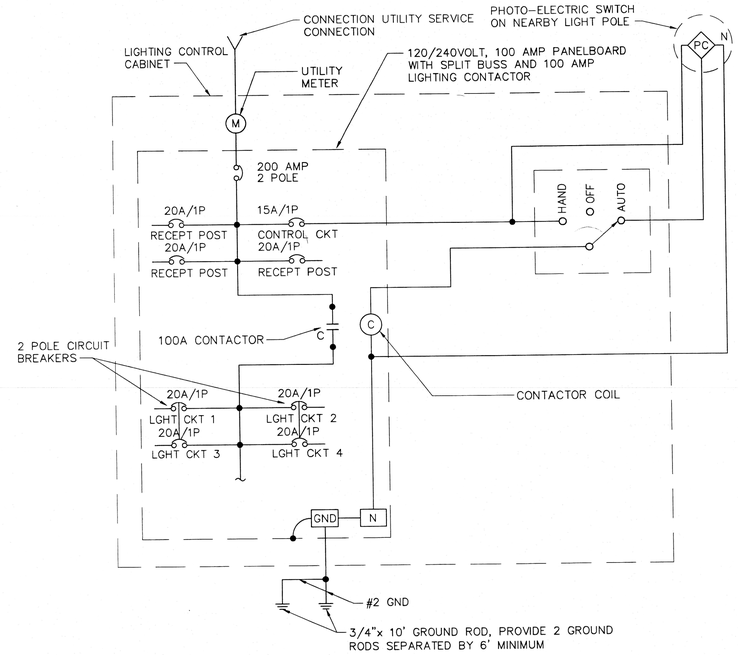
NOT TO SCALE


HOT DIPPED GALVANIZED ANCHOR BOLT (TYP FOR 4). BOLT SIZE, SPACING AND PROJECTION ABOVE CONCRETE PER MANUFACTURER'S TEMPLATE
* FOUNDATION SHALL BE 6" WIDER AND LONGER THAN CABINET BASE OR RECEPTACLE POST TO BE INSTALLED
PLAN
PROVIDE ANCHORING PER MANUFACTURERS RECOMMENDATION
1" MIN. PROJECTION ABOVE CONCRETE
4"
3"
4"
GROUND LINE
3'-6"
10' x 3/4" DIA. GROUND ROD ONLY FOR LIGHTING CONTROL CABINET
90° ELBOWS - NUMBER, SIZE & TYPE REQUIRED IN PLANS OR SPECIAL PROVISIONS
4000 PSI CEMENT CONCRETE
SECTION

NOTE: ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".

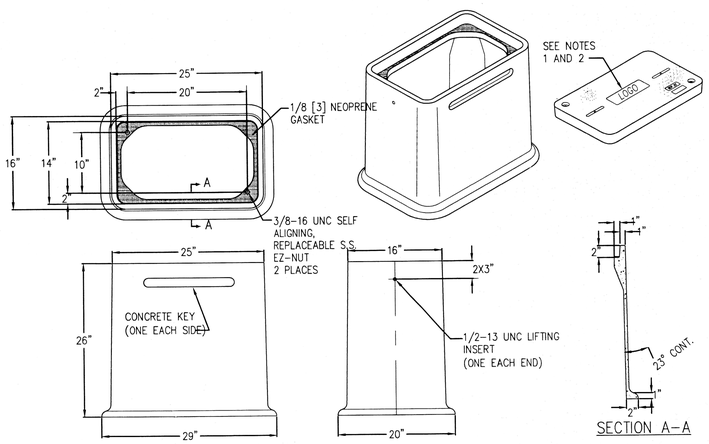
CONCRETE FOUNDATION FOR LIGHTING CONTROL CABINET AND RECEPTACLE POSTS

NOT TO SCALE



ONE LINE DIAGRAM

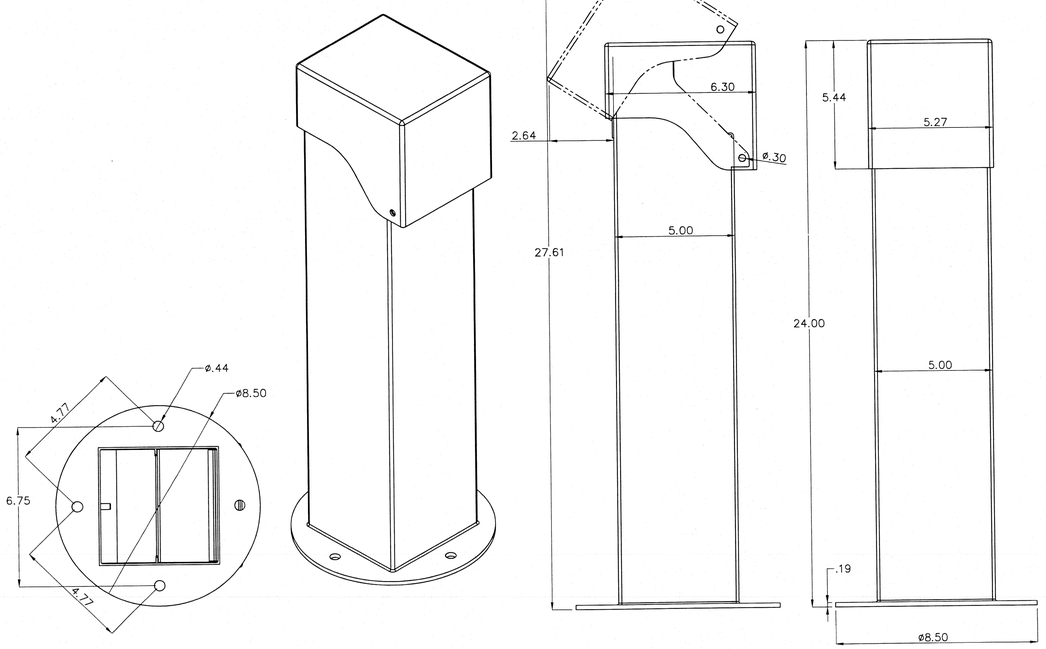
NOT TO SCALE



HANDHOLE DETAIL

NOT TO SCALE

NOTES:
1. HANDHOLE AND COVER SHALL BE CONSTRUCTED OF POLYMER CONCRETE, REINFORCED WITH FIBERGLASS. HANDHOLE SHALL BE OPEN BOTTOM AND UL LISTED. HANDHOLE SHALL BE QUAZITE BOX PD1324BG26 WITH COVER PG132GHH29 OR APPROVED EQUAL. HANDHOLE SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.
2. COVER TO BE "GREEN" COLOR AND LOGO TO BE SPECIFIED: 'LIGHTING'. FURNISHED W/ (2) 3/8-16 UNC X 3 LONG HEX HEAD BOLTS AND (2) 3/8 FLAT WASHERS. THIS COVER IS RATED FOR A STATIC DESIGN LOAD OF 22,500 LBS. OVER A 10 X 20 AREA AND MUST PASS A MIN. STATIC TEST LOAD OF 33,750 LBS..
3. PROVIDE 6" OF GRAVEL BORROW UNDER HANDHOLE.
4. INSTALL 10'X3/4" GROUND ROD IN HANDHOLE.



RECEPTACLE POST DETAIL

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KEY PLAN:

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ELECTRICAL CONTROL CABINET DETAILS

DESIGNED: TJM

DRAWN: TJM CHECKED: CWPC

DATE: 07.31.13

SCALE: 1"=20'

SUBMISSION: BID SET

DRAWING NO:

E-4

PROJECT: BROCKTON CITY HALL - SITE AND FAÇADE ILLUMINATION — **CD FIXTURE SCHEDULE**

RIPMAN LIGHTING CONSULTANTS (617) 489-3366 FAX (617) 489-5223 EMAIL: @ripmanlighting.com

BY: CHR RLC JOB NUMBER: 13013.0 DATE: 31 JULY 2103

IN BIDDING OR ORDERING FIXTURES, LAMPS OR CONTROL EQUIPMENT, REFER TO FIXTURE SCHEDULE NOTES AND ELECTRICAL SPECIFICATIONS (DIV 16000) FOR ADDITIONAL INFO + REQUIREMENTS SPECIFIC TO THIS PROJECT. REFER ALSO TO ANNOTATED LIGHTING FIXTURE CUTS ISSUED AS AN ADDENDUM TO THE ELECTRICAL SPECIFICATION FOR THIS PROJECT. ELECTRICAL CONTRACTOR TO PROVIDE AS PART OF BASE BID 10% EXTRA LAMPS, BALLASTS, LED BOARDS AND DRIVERS OF EACH DISTINCT TYPE USED ON THE PROJECT (MINIMUM 4 EACH) FOR OWNER'S ATTIC STOCK.

FIXT TYPE	GENERIC DESCRIPTION OF FIXTURE (LOCATION) MANUFACTURER'S SPECIFICATION	LAMPING	LAMP WATTS	BALLAST WATTS	MOUNTING	NOTES, VOLTAGE
A	3000K LED NEMA 1x1 VNSP ACCENT LIGHT (10 x 10 DEGREE BEAM) (POST-TOP) ABS # 5700 LED - SN - WW MOD 3000K - 120v - EL - 00 - YM - 00 - BLK (OR APPROVED EQUAL)	LED	42	0	POST-TOP	"WW MOD" = 3000K LEDS. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. 120v.
B	3000K LED NEMA 4H x 2V ACCENT LIGHT (10 X 48 DEGREE BEAM) (POST-TOP) ABS # 5700 LED - HRN - WW MOD 3000K - 120v - EL - 00 - YM MOD - 00 - BLK (OR APPROVED EQUAL)	LED	42	0	POST-TOP	"WW MOD = 3000K LEDS. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. "YM MOD" INDICATES PROVIDE 7 MOUNTING HOLES IN YOKE SPACED 1.5" ON CENTER, WITH THE FOURTH HOLE IN THE NORMAL POSITION. SO FIXTURE CAN BE MOUNTED AT VARIOUS ORIENTATIONS BY CHOOSING THE CORRECT BOLT HOLE TO USE TO MOUNT FIXTURE TO THE SUPPORT ARM. SUBMIT SHOP DRAWING. 120v.
C	3000K LED NEMA 5H x 5V FLOODLIGHT (POST-TOP) BEACON "ALPHA" # AL - U - 72NB - 170 - 3K - 5x5 - UNV - NP - SF3 - HV - BB (OR APPROVED EQUAL)	LED	170	0	POST-TOP	SLIPFITS 2-3/8" UPSTAND TENON. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. 120v.
D	3000K LED NEMA 3H x 5V FLOODLIGHT (POST-TOP) BEACON "ALPHA" # AL - U - 72NB - 170 - 3K - 3x5 - UNV - NP - SF3 - HV - BB (OR APPROVED EQUAL)	LED	170	0	POST-TOP	SLIPFITS 2-3/8" UPSTAND TENON. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. 120v.
PT-1	CITY OF BROCKTON STD POLE w/ LED FULL CUTOFF HEAD (ALL AREAS) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM (OR APPROVED EQUAL) FIXTURE: BEACON "URBAN SERIES" # CAP-26/60NB-136/4K/UNV/BB (OR APPROVED EQUAL) FIXTURE PHOTOMETRIC DISTRIBUTION PER ELECTRICAL ENGINEER'S SPECS	LED	136	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SAME CIRCUIT AS LUMINAIRE, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
PT-2	BROCKTON STD POLE w/ LED FULL CUTOFF HEAD, ONE ACCENT LIGHT (ALL AREAS) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM w/ 12' UPSTAND 2-3/8" TENON FOR FLOOD LIGHT MOUNTING (OR APPROVED EQUAL) FIXTURE: BEACON "URBAN SERIES" # CAP-26/60NB-136/4K/UNV/BB (OR APPROVED EQUAL) FIXTURE PHOTOMETRIC DISTRIBUTION PER ELECTRICAL ENGINEER'S SPECS ACCENT LIGHTS: FIXTURE TYPES C, D AS NOTED ON PLAN	LED	136	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL WITH 12" UPSTAND 2-3/8" OD TENON FOR MOUNTING ACCENT LIGHT. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. PROVIDE SECOND CIRCUIT FOR INDEPENDENT CONTROL OF ACCENT LIGHTS MOUNTED TO SAME POLE. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SAME CIRCUIT AS LUMINAIRE, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
PT-3	BROCKTON STD POLE w/ 3000K LED OPAL GLOBE (BLDG ENTRIES) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM FIXTURE: HEAD: BEACON "SPHERE" # SP20 - AW - F13 - LED55 - 3K - DIRV - PM - BB (OR APPROVED EQUAL)	LED	55	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL. FINISH: CITY STANDARD SEMI-GLOSS BLACKPOWDERCOAT. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SAME CIRCUIT AS LUMINAIRE, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
PT-4	BROCKTON STD POLE w/ LED FULL CUTOFF HEAD, 2 ACCENT LIGHTS (ALL AREAS) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM + UPSTAND CROSSBAR WIRING TROUGH TO SUPPORT 2 OR 4 ACCENT FIXTURESS (2 UP 2 DOWN) FIXTURE: BEACON "URBAN SERIES" # CAP-26/60NB-136/4K/UNV/BB (OR APPROVED EQUAL) HEAD PHOTOMETRIC DISTRIBUTION PER ELECTRICAL ENGINEER'S SPECIFICATIONS ACCENT LIGHTS: FIXTURE TYPES A, B AS NOTED ON PLAN	LED	136	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL WITH 12" UPSTAND TENON AND 30" CROSSBAR FIXTURE MOUNTING CHANNEL. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. PROVIDE SECOND CIRCUIT FOR INDEPENDENT CONTROL OF ACCENT LIGHTS MOUNTED TO SAME POLE. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SAME CIRCUIT AS LUMINAIRE, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
PT-5	BROCKTON STD POLE w/ LED FULL CUTOFF HEAD, 4 ACCENT LIGHTS (ALL AREAS) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM FIXTURE: BEACON "URBAN SERIES" # CAP-26/60NB-136/4K/UNV/BB (OR APPROVED EQ) FIXTURE PHOTOMETRIC DISTRIBUTION PER ELECTRICAL ENGINEER'S SPECIFICATIONS ACCENT LIGHTS: FIXTURE TYPES A, B AS NOTED ON PLAN	LED	136	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL WITH 12" UPSTAND TENON AND 30" CROSSBAR FIXTURE MOUNTING CHANNEL. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. PROVIDE SECOND CIRCUIT FOR INDEPENDENT CONTROL OF ACCENT LIGHTS MOUNTED TO SAME POLE. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SEPARATE CIRCUIT, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
PT-6	BROCKTON STD POLE w/ 3000K LED OPAL GLOBE, 2 ACCENT LIGHTS (BLDG ENTRIES) POLE: SPRING CITY # NSH6S-T10-7.0-16.00-TN4.0/8.0-FH-130-2NW-CB-CO w/ STRATFORD ARM + UPSTAND CROSSBAR WIRING TROUGH TO SUPPORT 2 OR 4 ACCENT FIXTURES (2 UP 2 DOWN) HEAD: BEACON "SPHERE" # SP20 - AW - F13 - LED55 - 3K - DIRV - PM - BB (OR APPROVED EQUAL) ACCENT LIGHTS: FIXTURE TYPES A, B AS NOTED ON PLAN	LED	55	0	CITY STD ORNAMENTAL POST	POLE: SPRING CITY "NORTHAMPTON" 16' CITY STANDARD ORNAMENTAL POLE w/ SS FLUTED SHAFT AND ORNAMENTAL CLAMSHELL 2-PART DUCTILE CAST IRON BASE. ARM: BEACON "STRATFORD" CAST ALUMINUM OR APPROVED EQUAL WITH 12" UPSTAND TENON AND 24" CROSSBAR FIXTURE MOUNTING CHANNEL. FINISH: CITY STANDARD SEMI-GLOSS BLACK POWDERCOAT. PROVIDE SECOND CIRCUIT FOR INDEPENDENT CONTROL OF ACCENT LIGHTS MOUNTED TO SAME POLE. "-CO" INDICATES BEACON TO PROVIDE PROVIDE ONE CONVENIENCE OUTLET PER POLE FOR HOLIDAY DECORATIONS, ON SAME CIRCUIT AS LUMINAIRE, PER BROCKTON STANDARD POLE AND ARM DETAIL. 120v.
RG-1	42w INGROUND LED WALLWASHER (FAÇADE) KIM "LIGHTVAULT" # LTV81FF - WW - 36L - 3K - UV (OR APPROVED EQUAL BY ALLSCAPE OR HYDREL)	LED	44	0	RCESSED FLUSH INGROUND	COMPOSITE HOUSING, BRONZE FACEPLATE, WALLWASH DISTRIBUTION. LOCATE CENTERLIBE 6' FROM FAÇADE UON ON PLAN. EC PROVIDE ONE CU YD GRAVEL DRYWELL AROUND EACH FIXTURE. 120v.
RG-2	42w INGROUND LED LINEAR NARROW FLOOD UPLIGHT (SINGLE FLAGPOLES) KIM "LIGHTVAULT" # LTV81FF - NFL - 36L - 4K - UV HYDREL # 9350-A-WHT30K-120-SP-CLC-34B-UB-LP-BL ALLSCAPE # SL-43-TITAN25WW-CUS3-120-277-SPT-F-BK-CR (OR APPROVED EQ)	LED	44	0	RCESSED FLUSH INGROUND	COMPOSITE HOUSING, BRONZE FACEPLATE, NARROW FLOOD DISTRIBUTION. NOMINAL 25 DEGREE BEAM SPREAD. LOCATE CENTERLIBE 3' FROM BASE OF POLE UON ON PLAN + AIM FIXTURE AT HEAD OF POLE DURING INSTALLATION. EC PROVIDE ONE CU YD GRAVEL DRYWELL AROUND EACH FIXTURE. 120v.
RG-3	(NOT USED)		0	0		
RG-4	16w INGROUND LED SPOTLIGHT CAST INTO PRECAST CONC BASE (MEMORIAL) KIM "LIGHTVAULT" # LTV62EB - SP - 12L - 3K - UV (OR APPROVED EQUAL BY ALLSCAPE OR HYDREL)	LED	16	0	RCESSED FLUSH INGROUND	COMPOSITE HOUSING, BRONZE FACEPLATE, SPOT DISTRIBUTION. EC PROVIDE + INSTALL FIXTURE CAST INTO PRECAST BASE PER DWGS. INSTALL SO BEAM CENTER IS AIMED AT FIREMAN'S CHEST (WITHOUT INTERNAL AIMING ADJUSTMENT OF LED BOARD). 120v.
RG-5	10w INGRND LED FL CAST INTO PRECAST CONC BASE w/ LINEAR SPREAD LENS (MEMORIAL) KIM "LIGHTVAULT" # LTV62EB - NFL - 5L - 12L - 3K - UV (OR APPROVED EQUAL BY ALLSCAPE OR HYDREL)	LED	16	0	RCESSED FLUSH INGROUND	COMPOSITE HOUSING, BRONZE FACEPLATE, FLOOD DISTRIBUTION. EC PROVIDE + INSTALL FIXTURE CAST INTO PRECAST BASE PER DWGS. INSTALL SO BEAM CENTER IS AIMED AT FIREMAN'S FEET (WITHOUT INTERNAL AIMING ADJUSTMENT OF LED BOARD). INSTALL LINEAR SPREAD LENS WITH RIBS HORIZONTAL TO CREATE ELLIPTICAL BEAM LIGHTING STATUE AND BASE FROM TOP TO BOTTOM. 120v.

FIXTURE SCHEDULE NOTES – BROCKTON CITY HALL SITE + FAÇADE LIGHTING — 31 JULY 2013

KEY TO FIXTURE TYPES

FIXTURE TYPES ARE CODED USING TWO LETTERS.
THE FIRST IDENTIFIES HOW THE FIXTURE IS MOUNTED;
THE SECOND, THE SURFACE TO WHICH THE FIXTURE IS MOUNTED:

P - PENDANT
R - RECESSED
S - SURFACE

B - BUILT-IN
C - CEILING
G - GROUND
W - WALL

THE FOLLOWING CODES MAY ALSO BE USED:

CD - CONTROL DEVICE
PT – POSTTOP[

Plans, fixture schedules and cuts all are coded with this nomenclature. Please use it in any related drawings, sketches or correspondence.

Code Conformance

(1) All installations shall be in conformance with the requirements codes (local, state, national). The electrical subcontractor shall be responsible for conformance with said requirements and shall immediatly notify landscape architect, architect and electrical engineer in writing should any requirement of the contract documents appear to be in violation of code requirements or good practice.

(2) All lighting and control equipment shall conform to the requirements of all applicable codes.

Definitions

(1) "MOD" indicates a modification to a standard fixture. See "Notes" column of fixture schedule for description of modification.

(2) "OR EQUAL" means equivalent or superior in performance, materials, workmanship and appearance to the specified equipment.

Responsibilities of the Electrical Subcontractor

(3) Electrical subcontractor shall verify that voltages specified for fixtures are compatible with service and branch circuit specifications.

General Notes

(4) Equipment specified has been carefully selected to meet the needs of the project. Proposed substitute equipment will be considered only if a complete substitution submittal is received by the landscape architect, architect, electrical engineer and lighting consultant within a reasonable time frame from the date of the award of contract (i.e., early enough that rejection of proposed substitutes will not jeopardize timely shipping schedules for specified equipment, and not more than one month from date of award of contract).

(5) The desired manufacturer and fixture has been specified first, with catalog number and notes. Other manufacturers or fixtures listed (if any) may be considered alternates.

(6) Base bid to include only fixtures listed in fixture schedule as specified by desired manufacturer, or listed approved equal manufacturer. Proposed substitutions by manufacturers not listed as acceptable alternate manufacturers on the fixture schedule may only be used with approval of architect, electrical engineer and lighting consultant. Such approval requires receipt of complete substitution submittal including fixture cuts with photometric data. Submittals without this information will not be considered. Proposed substitutions by manufacturers not listed in the fixture schedule which do not clearly result in a significant savings to the owner will not be considered. Proposed substitutions by manufacturers not listed in the fixture schedule which do not identify the proposed savings to the owner at the time the substitution is proposed will be rejected without further consideration.

(7) In addition to any submittal requirements stated in electrical specifications of contract documents, shop drawings and product data submittals shall include physical dimensions, photometrics, specific lamp type and mounting details.

(8) Shop drawings must be submitted to and approved by landscape architect, architect, electrical engineer and lighting consultant prior to purchase of any lighting equipment or control equipment.

(9) No fabrication of custom or semi-custom lighting or control equipment shall be done prior to receipt of shop drawings reviewed by landscape architect, architect, electrical engineer and lighting consultant.

(10) Do not scale lighting design drawings for exact location of light fixtures.

(11) Final location of all exterior fixtures in landscaped areas shall be confirmed by the landscape architect in the field after rough grading and installation of major plantings.

(12) Preliminary aiming of all adjustable lighting equipment shall be done during installation by the electrical subcontractor as indicated on the aiming diagram on plan. Final aiming of all adjustable lighting equipment shall be done by the electrical subcontractor, as directed by the lighting consultant.

Luminaires and Accessories

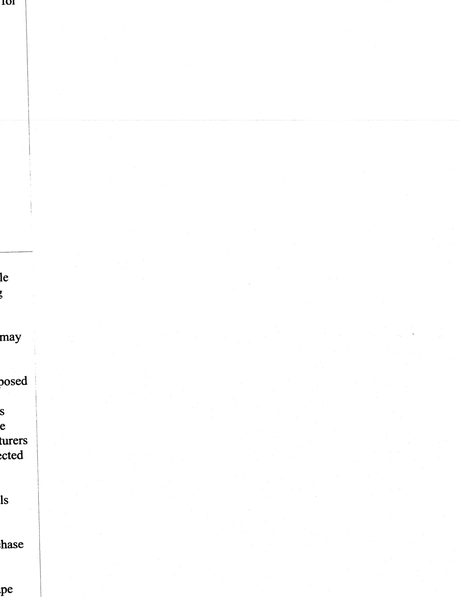
(13) Provide lighting fixtures and control equipment complete, wired and assembled, as specified and shown on drawings, with all accessories required to make a complete and functional installation.

(14) All finishes specified for light fixtures and control equipment must be confirmed with landscape architect prior to purchase of fixtures.

Control Devices

(15) Relays used for control of lighting (if any) shall be located and the location soundproofed so as to be inaudible from normally occupied areas when operated.

PLAN DETAIL



SECTION DETAIL

1 CONCRETE PLINTH (FOR RG-4 & 5)
1-1/2"=1'-0"

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City Hall Plaza
Brockton, MA
for the City of Brockton
and
The Executive Office of Energy and Environmental Affairs

KEY PLAN:

REVISIONS:

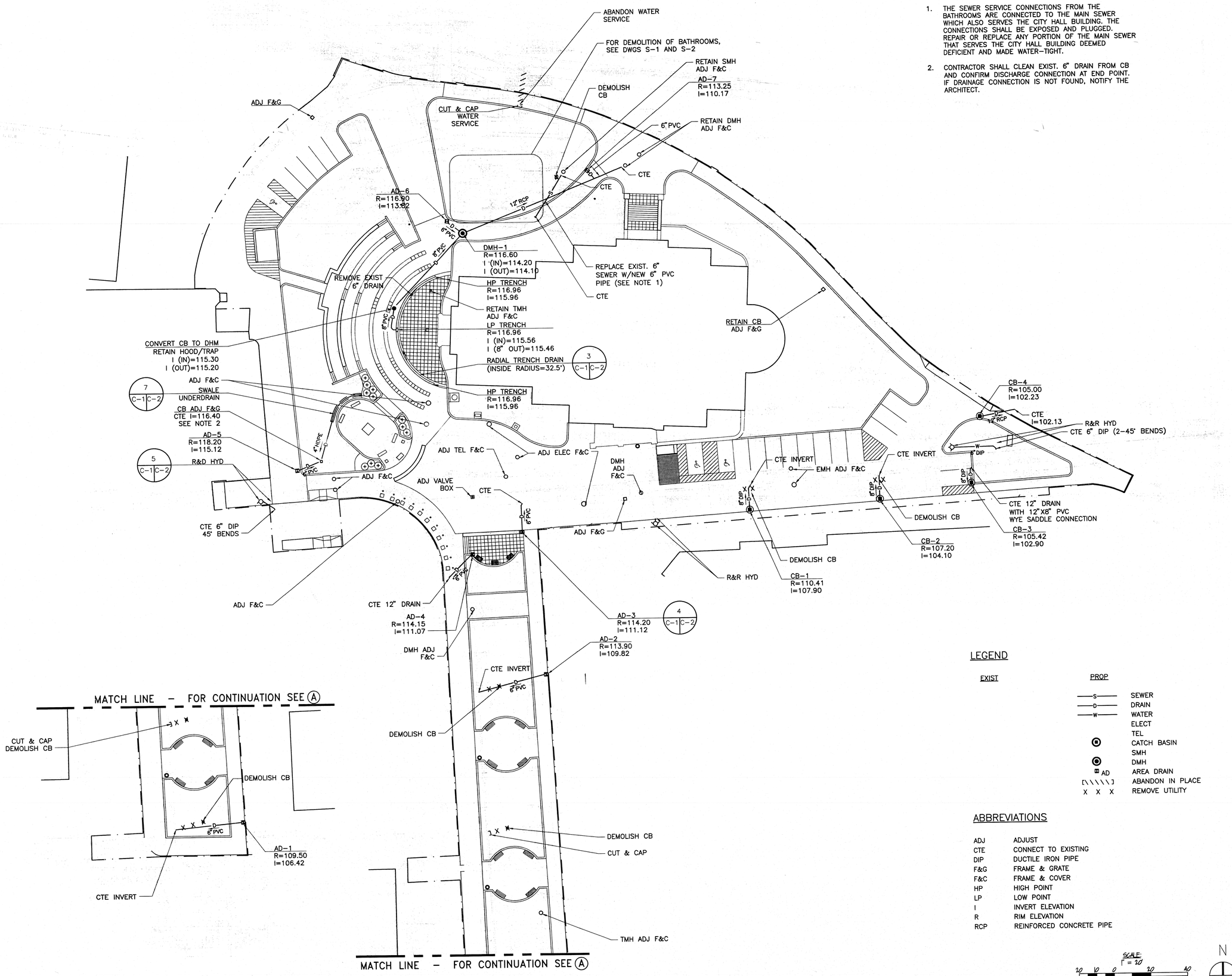
No.	Revision	Date

STAMPED AND SIGNED:

DRAWING TITLE:
LIGHTING FIXTURE DETAILS

DESIGNED: CHR
DRAWN: WJP CHECKED: WCK/CHR
DATE: 07.31.13
SCALE: AS NOTED
SUBMISSION: BID SET

DRAWING NO:
E-5



NOTES:

1. THE SEWER SERVICE CONNECTIONS FROM THE BATHROOMS ARE CONNECTED TO THE MAIN SEWER WHICH ALSO SERVES THE CITY HALL BUILDING. THE CONNECTIONS SHALL BE EXPOSED AND PLUGGED. REPAIR OR REPLACE ANY PORTION OF THE MAIN SEWER THAT SERVES THE CITY HALL BUILDING DEEMED DEFICIENT AND MADE WATER-TIGHT.
2. CONTRACTOR SHALL CLEAN EXIST. 6" DRAIN FROM CB AND CONFIRM DISCHARGE CONNECTION AT END POINT. IF DRAINAGE CONNECTION IS NOT FOUND, NOTIFY THE ARCHITECT.

LEGEND

EXIST	PROP	
	S	SEWER
	D	DRAIN
	W	WATER
		ELECT
		TEL
		CATCH BASIN
		SMH
		DMH
	AD	AREA DRAIN
		ABANDON IN PLACE
	X X X	REMOVE UTILITY

ABBREVIATIONS

ADJ	ADJUST
CTE	CONNECT TO EXISTING
DIP	DUCTILE IRON PIPE
F&G	FRAME & GRATE
F&C	FRAME & COVER
HP	HIGH POINT
LP	LOW POINT
I	INVERT ELEVATION
R	RIM ELEVATION
RCP	REINFORCED CONCRETE PIPE

SCALE: 1" = 20'

N

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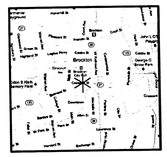
KEY PLAN:



REVISIONS:

No.	Revision	Date

STAMPED AND SIGNED:

DRAWING TITLE:

SITE UTILITY PLAN

DESIGNED: GP

DRAWN: FLC CHECKED: JKT

DATE: 07.31.13

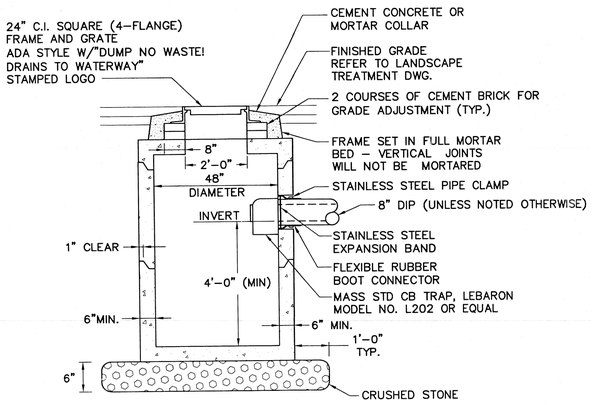
SCALE: 1"=20'-0"

SUBMISSION: BID SET

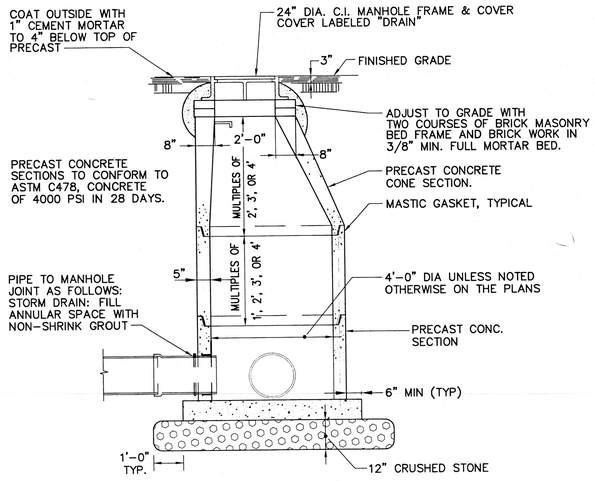
DRAWING NO:

C-1

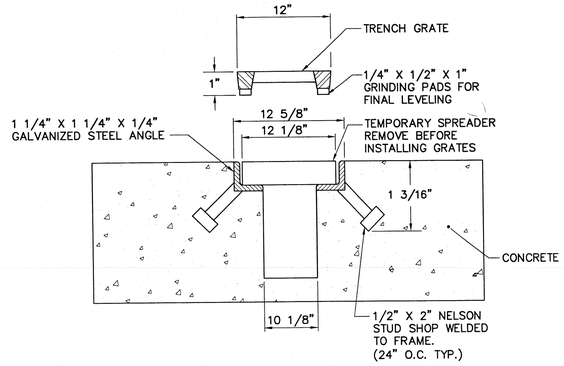
FILENAME: T:\VG-407 BR&R CITY HALL\CAD\CONSTRUCTION\ARCHITECTURAL\C-1 SITE UTILITY PLAN.dwg Layout: 1 Aug 01, 2013 10:36am By: Colleen T


24" C.I. SQUARE (4-FLANGE) FRAME AND GRATE ADA STYLE W/"DUMP NO WASTE! DRAINS TO WATERWAY" STAMPED LOGO
CEMENT CONCRETE OR MORTAR COLLAR
FINISHED GRADE REFER TO LANDSCAPE TREATMENT DWG.
2 COURSES OF CEMENT BRICK FOR GRADE ADJUSTMENT (TYP.)
FRAME SET IN FULL MORTAR BED - VERTICAL JOINTS WILL NOT BE MORTARED
8"
2'-0"
48" DIAMETER
STAINLESS STEEL PIPE CLAMP
8" DIP (UNLESS NOTED OTHERWISE)
INVERT
1" CLEAR
STAINLESS STEEL EXPANSION BAND
FLEXIBLE RUBBER BOOT CONNECTOR
4'-0" (MIN)
MASS STD CB TRAP, LEBARON MODEL NO. L202 OR EQUAL
6"MIN.
6" MIN.
1'-0" TYP.
6"
CRUSHED STONE

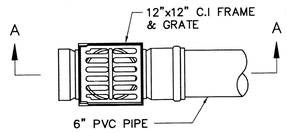
1 C-1 PRECAST SHALLOW CATCH BASIN
NOT TO SCALE


COAT OUTSIDE WITH 1" CEMENT MORTAR TO 4" BELOW TOP OF PRECAST
24" DIA. C.I. MANHOLE FRAME & COVER COVER LABELED "DRAIN"
3" FINISHED GRADE
ADJUST TO GRADE WITH TWO COURSES OF BRICK MASONRY BED FRAME AND BRICK WORK IN 3/8" MIN. FULL MORTAR BED.
8"
2'-0"
8"
PRECAST CONCRETE SECTIONS TO CONFORM TO ASTM C478, CONCRETE OF 4000 PSI IN 28 DAYS.
MULTIPLES OF 2', 3', OR 4'
PRECAST CONCRETE CONE SECTION.
MASTIC GASKET, TYPICAL
5"
MULTIPLES OF 1', 2', 3', OR 4'
4'-0" DIA UNLESS NOTED OTHERWISE ON THE PLANS
PIPE TO MANHOLE JOINT AS FOLLOWS: STORM DRAIN: FILL ANNULAR SPACE WITH NON-SHRINK GROUT
PRECAST CONC. SECTION
6" MIN (TYP)
1'-0" TYP.
12" CRUSHED STONE

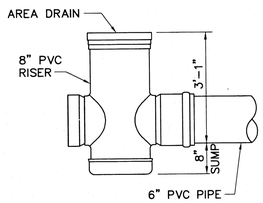
2 C-1 DRAIN MANHOLE
NOT TO SCALE


12"
TRENCH GRATE
1"
1/4" X 1/2" X 1" GRINDING PADS FOR FINAL LEVELING
1 1/4" X 1 1/4" X 1/4" GALVANIZED STEEL ANGLE
12 5/8"
12 1/8"
TEMPORARY SPREADER REMOVE BEFORE INSTALLING GRATES
1 3/16"
CONCRETE
10 1/8"
1/2" X 2" NELSON STUD SHOP WELDED TO FRAME. (24" O.C. TYP.)

3 C-1 TRENCH DRAIN DETAIL
NOT TO SCALE

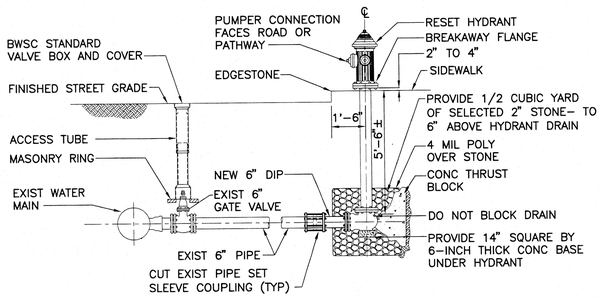


PLAN

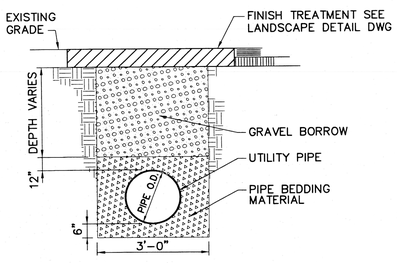


SECTION A-A

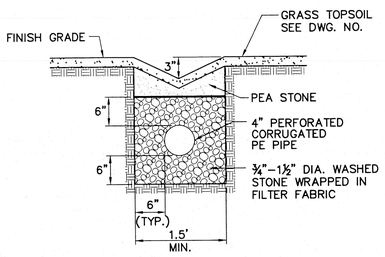
4 C-1 AREA DRAIN DETAILS
NOT TO SCALE



5 C-1 HYDRANT REMOVE AND RESET
NOT TO SCALE



6 C-1 UTILITY TRENCH DETAIL
NOT TO SCALE



7 C-1 SWALE UNDERDRAIN
NOT TO SCALE

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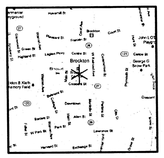
KEY PLAN:



REVISIONS:

No.	Revision	Date

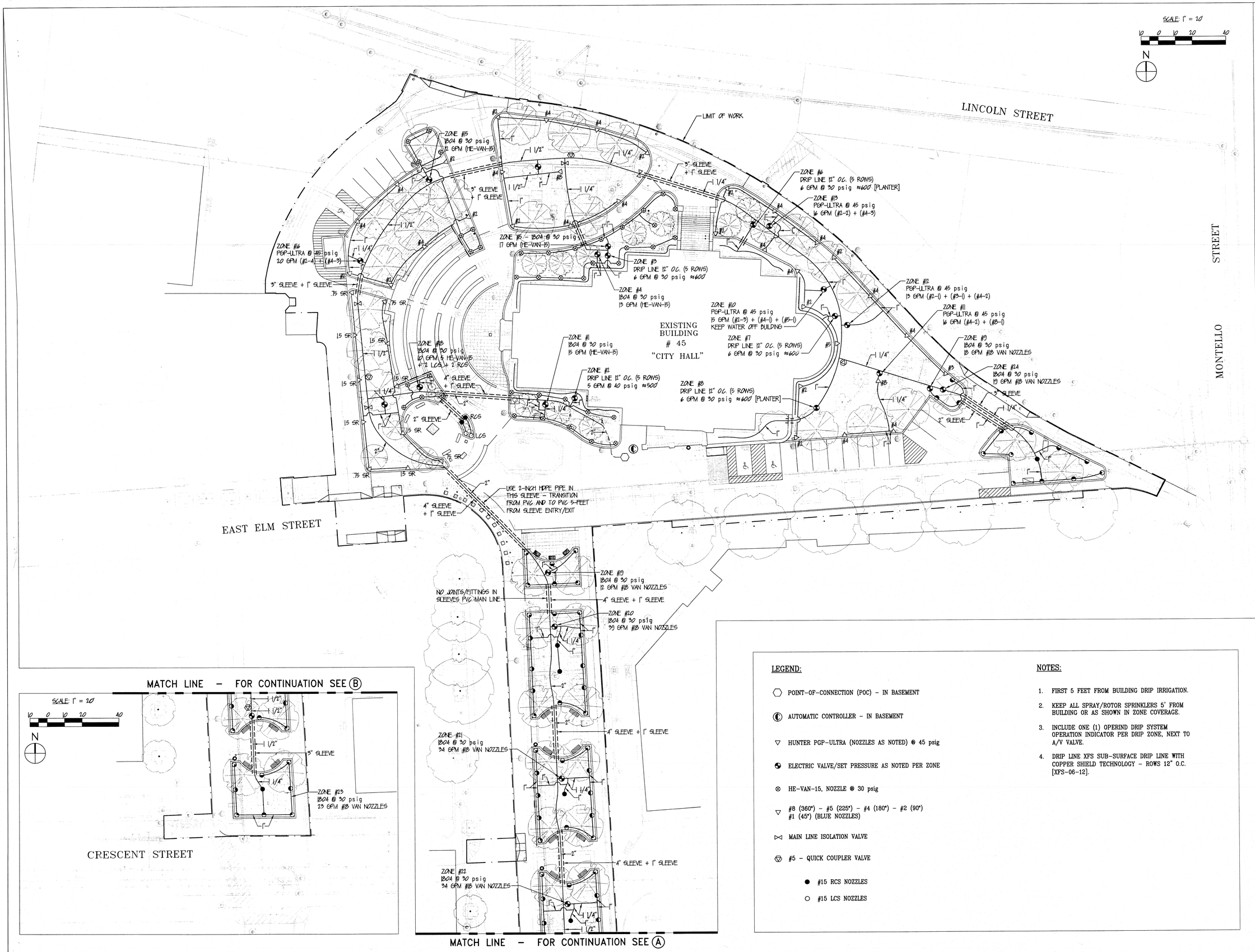
STAMPED AND SIGNED:

DRAWING TITLE:
CIVIL UTILITY DETAILS

DESIGNED: GP
DRAWN: FLC CHECKED: JKT
DATE: 07.31.13
SCALE: AS SHOWN
SUBMISSION: BID SET

DRAWING NO:
C-2

FILENAME: T:\LG-407 BR&R CITY PARKS\BROCKTON - CITY HALL PLAZA\DRAWINGS\CIVIL\CC-2.DWG - Jul 29, 2013 - 7:52am BY Mize_V


SCALE: 1" = 20'
10 0 10 20 40
N
LINCOLN STREET
MONTELLO STREET
EAST ELM STREET
LIMIT OF WORK
EXISTING BUILDING # 45 "CITY HALL"
ZONE #1 1804 @ 30 psig 15 GPM (HE-VAN-15)
ZONE #2 DRIP LINE 12" OC. (5 ROWS) 5 GPM @ 40 psig ≈500
ZONE #3 DRIP LINE 12" OC. (5 ROWS) 6 GPM @ 30 psig ≈600
ZONE #4 1804 @ 30 psig 13 GPM (HE-VAN-15)
ZONE #5 1804 @ 30 psig 17 GPM (HE-VAN-15)
ZONE #6 PGP-ULTRA @ 45 psig 20 GPM (#2-4) + (#4-3)
ZONE #6 DRIP LINE 12" OC. (5 ROWS) 6 GPM @ 30 psig ≈600 [PLANTER]
ZONE #7 DRIP LINE 12" OC. (5 ROWS) 6 GPM @ 30 psig ≈600
ZONE #8 DRIP LINE 12" OC. (5 ROWS) 6 GPM @ 30 psig ≈600 [PLANTER]
ZONE #9 1804 @ 30 psig 13 GPM #18 VAN NOZZLES
ZONE #10 PGP-ULTRA @ 45 psig 15 GPM (#2-3) + (#4-1) + (#3-1) KEEP WATER OFF BUILDING
ZONE #11 PGP-ULTRA @ 45 psig 16 GPM (#4-2) + (#3-1)
ZONE #12 PGP-ULTRA @ 45 psig 13 GPM (#2-1) + (#3-1) + (#4-2)
ZONE #12A 1804 @ 30 psig 13 GPM #18 VAN NOZZLES
ZONE #13 PGP-ULTRA @ 45 psig 16 GPM (#2-2) + (#4-3)
ZONE #15 1804 @ 30 psig 12 GPM (HE-VAN-15)
ZONE #18 1804 @ 30 psig 10 GPM 5 HE-VAN-15 +2 LCS + 2 RCS
3" SLEEVE + 1" SLEEVE
4" SLEEVE + 1" SLEEVE
2" SLEEVE
.75 SR
1 1/2"
1 1/4"
1"
2"
RCS
LCS
USE 2-INCH HDPE PIPE IN THIS SLEEVE - TRANSITION FROM PVC AND TO PVC 5-FEET FROM SLEEVE ENTRY/EXIT
NO JOINTS/FITTINGS IN SLEEVES PVC MAIN LINE
ZONE #19 1804 @ 30 psig 12 GPM #18 VAN NOZZLES
ZONE #20 1804 @ 30 psig 33 GPM #18 VAN NOZZLES
ZONE #21 1804 @ 30 psig 34 GPM #18 VAN NOZZLES
ZONE #22 1804 @ 30 psig 34 GPM #18 VAN NOZZLES

MATCH LINE - FOR CONTINUATION SEE (B)

MATCH LINE - FOR CONTINUATION SEE (A)

(A) SITE IRRIGATION PLAN - PART 1

(B) SITE IRRIGATION PLAN - PART 2

LEGEND:

- POINT-OF-CONNECTION (POC) - IN BASEMENT
- AUTOMATIC CONTROLLER - IN BASEMENT
- HUNTER PGP-ULTRA (NOZZLES AS NOTED) @ 45 psig
- ELECTRIC VALVE/SET PRESSURE AS NOTED PER ZONE
- HE-VAN-15, NOZZLE @ 30 psig
- #8 (360°) - #5 (225°) - #4 (180°) - #2 (90°) #1 (45°) (BLUE NOZZLES)
- MAIN LINE ISOLATION VALVE
- #5 - QUICK COUPLER VALVE
  - #15 RCS NOZZLES
  - #15 LCS NOZZLES

NOTES:

1. FIRST 5 FEET FROM BUILDING DRIP IRRIGATION.
2. KEEP ALL SPRAY/ROTOR SPRINKLERS 5' FROM BUILDING OR AS SHOWN IN ZONE COVERAGE.
3. INCLUDE ONE (1) OPERIND DRIP SYSTEM OPERATION INDICATOR PER DRIP ZONE, NEXT TO A/V VALVE.
4. DRIP LINE XFS SUB-SURFACE DRIP LINE WITH COPPER SHIELD TECHNOLOGY - ROWS 12" O.C. [XFS-06-12].

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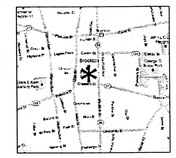
KEY PLAN:



REVISIONS:

No.	Revision	Date

STAMPED AND SIGNED:

NOT FOR CONSTRUCTION

DRAWING TITLE:

SITE IRRIGATION PLAN

DESIGNED: RH

DRAWN: PS CHECKED: NB

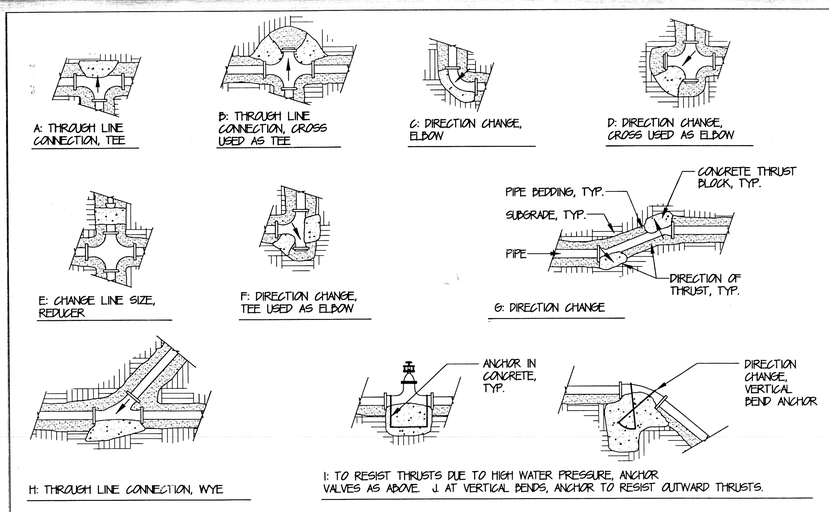
DATE: 07.31.13

SCALE: 1"=20'-0"

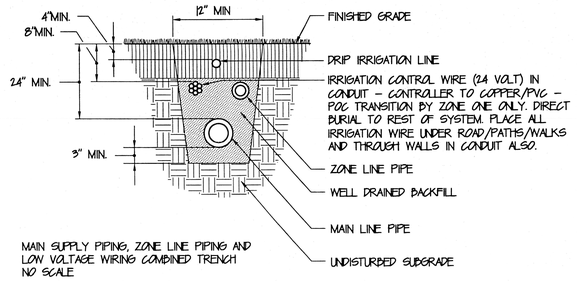
SUBMISSION: BID SET

DRAWING NO:

L-5

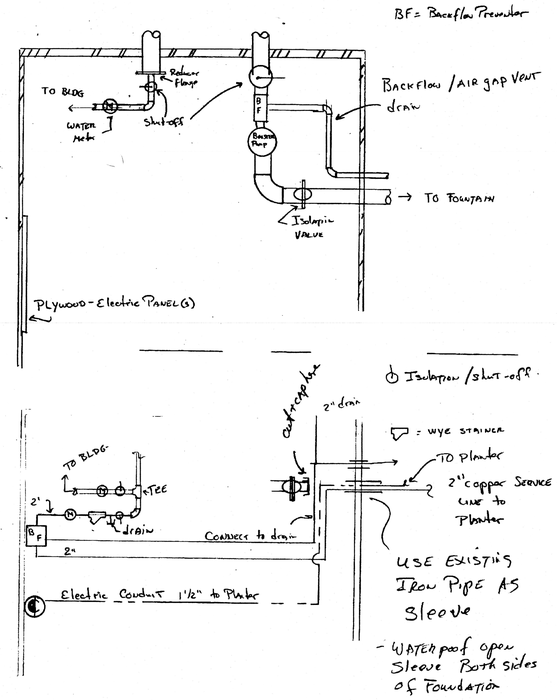

A: THROUGH LINE CONNECTION, TEE
B: THROUGH LINE CONNECTION, CROSS USED AS TEE
C: DIRECTION CHANGE, ELBOW
D: DIRECTION CHANGE, CROSS USED AS ELBOW
E: CHANGE LINE SIZE, REDUCER
F: DIRECTION CHANGE, TEE USED AS ELBOW
PIPE BEDDING, TYP.
SUBGRADE, TYP.
PIPE
CONCRETE THRUST BLOCK, TYP.
DIRECTION OF THRUST, TYP.
G: DIRECTION CHANGE
H: THROUGH LINE CONNECTION, WYE
ANCHOR IN CONCRETE, TYP.
DIRECTION CHANGE, VERTICAL BEND ANCHOR
I: TO RESIST THRUSTS DUE TO HIGH WATER PRESSURE, ANCHOR VALVES AS ABOVE. J: AT VERTICAL BENDS, ANCHOR TO RESIST OUTWARD THRUSTS.

1 TYPICAL IRRIGATION THRUSTBLOCKS
SCALE: NOT TO SCALE

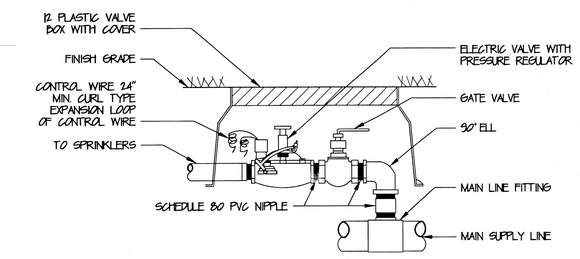

4" MIN.
8" MIN.
24" MIN.
3" MIN.
12" MIN
FINISHED GRADE
DRIP IRRIGATION LINE
IRRIGATION CONTROL WIRE (24 VOLT) IN CONDUIT – CONTROLLER TO COPPER/PVC – PVC TRANSITION BY ZONE ONE ONLY. DIRECT BURIAL TO REST OF SYSTEM. PLACE ALL IRRIGATION WIRE UNDER ROAD/PATHS/WALKS AND THROUGH WALLS IN CONDUIT ALSO.
ZONE LINE PIPE
WELL DRAINED BACKFILL
MAIN LINE PIPE
UNDISTURBED SUBGRADE

MAIN SUPPLY PIPING, ZONE LINE PIPING AND LOW VOLTAGE WIRING COMBINED TRENCH
NO SCALE

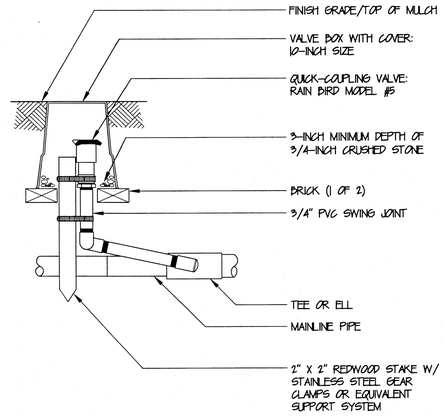
2 IRRIGATION TRENCHING DETAIL
SCALE: NOT TO SCALE



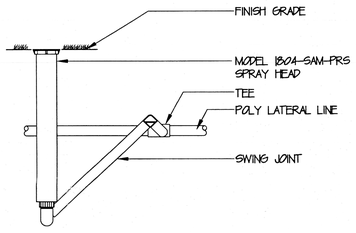
3 POINT OF CONNECTION
SCALE: NOT TO SCALE


12 PLASTIC VALVE BOX WITH COVER
FINISH GRADE
CONTROL WIRE 24" MIN. CURL TYPE EXPANSION LOOP OF CONTROL WIRE
TO SPRINKLERS
SCHEDULE 80 PVC NIPPLE
ELECTRIC VALVE WITH PRESSURE REGULATOR
GATE VALVE
90° ELL
MAIN LINE FITTING
MAIN SUPPLY LINE

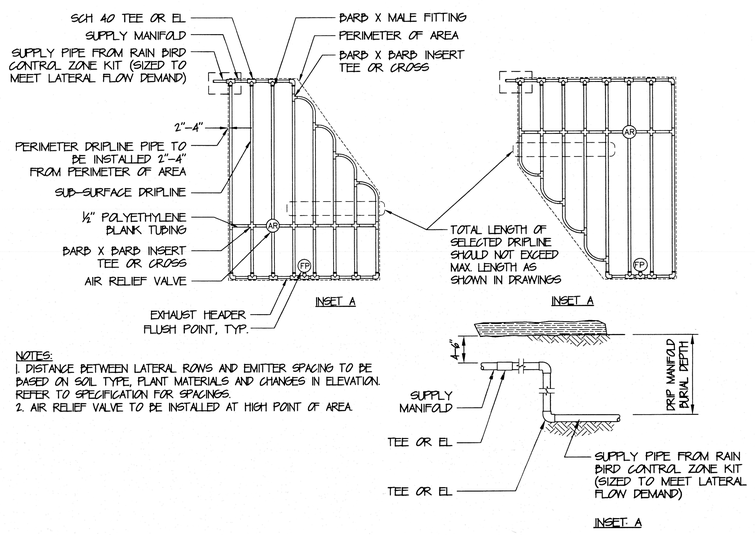
4 ELECTRIC VALVE WITH PRESSURE REGULATOR
SCALE: NOT TO SCALE


FINISH GRADE/TOP OF MULCH
VALVE BOX WITH COVER: 10-INCH SIZE
QUICK-COUPLING VALVE: RAIN BIRD MODEL #5
3-INCH MINIMUM DEPTH OF 3/4-INCH CRUSHED STONE
BRICK (1 OF 2)
3/4" PVC SWING JOINT
TEE OR ELL
MAINLINE PIPE
2" X 2" REDWOOD STAKE W/ STAINLESS STEEL GEAR CLAMPS OR EQUIVALENT SUPPORT SYSTEM

5 QUICK COUPLING VALVE
SCALE: NOT TO SCALE



6 SPRAY HEAD
SCALE: NOT TO SCALE


SCH 40 TEE OR EL
SUPPLY MANIFOLD
SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
2"–4"
PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"–4" FROM PERIMETER OF AREA
SUB-SURFACE DRIPLINE
½" POLYETHYLENE BLANK TUBING
BARB X BARB INSERT TEE OR CROSS
AIR RELIEF VALVE
EXHAUST HEADER FLUSH POINT, TYP.
BARB X MALE FITTING
PERIMETER OF AREA
BARB X BARB INSERT TEE OR CROSS
TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED MAX. LENGTH AS SHOWN IN DRAWINGS
AR
FP
INSET A
4"–6"
SUPPLY MANIFOLD
TEE OR EL
TEE OR EL
DRIP MANIFOLD BURIAL DEPTH
SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
INSET A

NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. REFER TO SPECIFICATION FOR SPACINGS.
2. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.

7 SUB-SURFACE DRIPLINE IRREGULAR SHAPED LAYOUT
SCALE: NOT TO SCALE

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IRRIGATION DETAILS

DESIGNED: RH

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SUBMISSION: BID SET

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